

VTrans PDD Construction Section

Annual Report January 2014



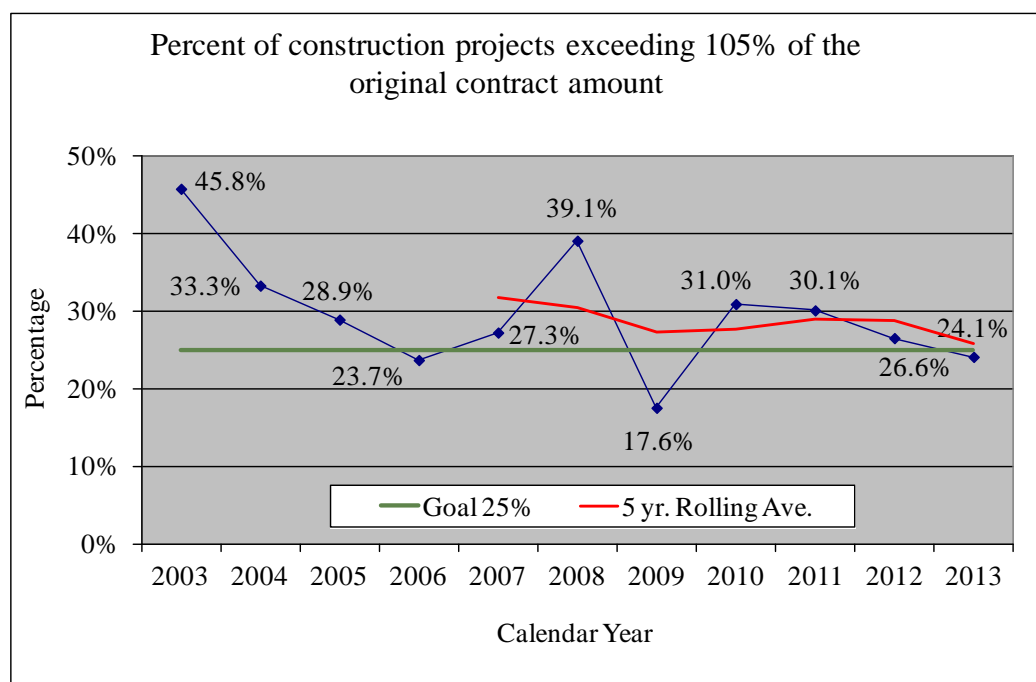
The mission of the Construction Section is to provide oversight of construction related activities performed by contractors to ensure the safety of the workers and traveling public, that the contractor complies with all laws and regulations, that all materials and work conform to the contract requirements, that the work is performed in accordance with all environmental permits, that the contractor and subcontractors are reimbursed in a timely manner, and to deliver the projects on time and on budget.

HIGHLIGHTS OF THE YEAR

- In calendar year 2013, 64 construction projects were completed totaling more than \$166 million in payments to contractors.
- The Office of the State Auditor conducted an audit of two construction contracts and the findings were considered minor. Procedures are being revised to address the findings. The reports can be found with this link: <http://auditor.vermont.gov/audits/performance>
- There were no fatalities within the work zones in 2013.
- The newly created Regional Process Manual was released for use in 2013.
- VTrans prevailed at the Transportation Board and successfully defended a contractor claim valued at over \$450,000.00.
- The Construction Section Headquarters moved to its new open floor plan located in the Dewey Building at National Life.

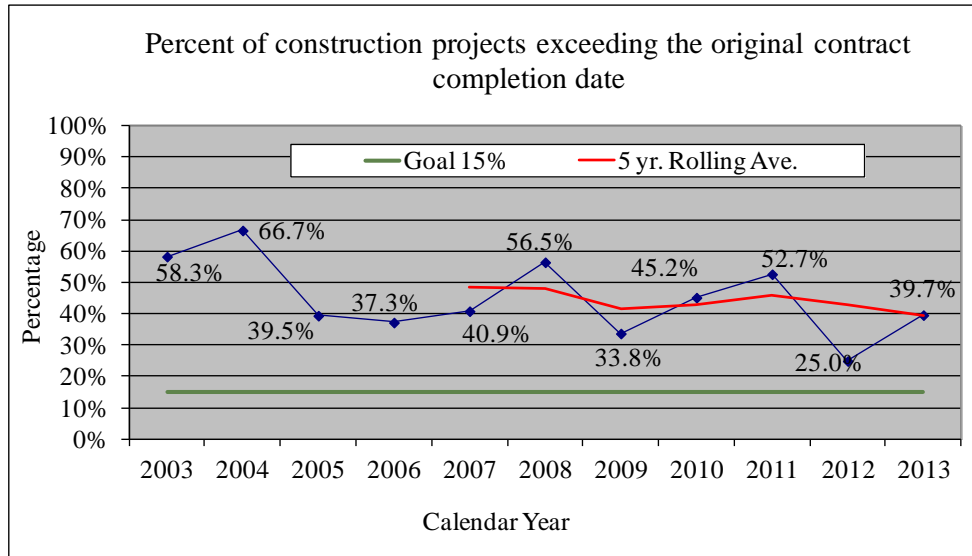
Key Performance Indicators

The performance indicator for on budget delivery is reflected in the following graph. The goal is to have fewer than 25% of projects exceeding the original low bid contract amount plus a five percent contingency.



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The performance indicator for on time delivery is reflected in the following graph. The goal is to have fewer than 15% of contracts exceeding the original completion date.



Section Management

The Construction Section is the Agency leader in Business Process Management and is working to deliver the first cloud based IT solution that will transform the Finals Process (a reconciliation process used to wrap up construction contracts).

As co-chair and secretary of the Technical Pave Committee, section staff worked closely with industry to bring important changes to the pavement specifications that will improve the performance of the pavements. The improvements include adding more liquid asphalt to the pavements to combat lean mix designs which were failing prematurely, the use of transfer vehicles to reduce thermal segregation, expanding the use of warm mix asphalts in an effort to reduce greenhouse gases and save money, and the deployment of the safety-edge treatment designed to provide safer roadside shoulders.

Construction Section staff worked closely with Associated General Contractors of Vermont to reach consensus on the progress schedule specification. This contract provision is an important step toward achieving our goal of delivering projects on-time and establishing credibility when communicating with stakeholders the impacts of a construction project on the community and commuters alike.

The electronic plan review tool developed by the Construction Section was expanded to allow consultants outside of the Agency to participate in real time. This will enhance the dialogue during the plan review process for close to 50% of the projects and will lead to better contract documents by having the design team and reviewers all participate in the review process.

The Construction Section procured a three year term agreement with consultant firms to deliver construction inspection and specialty services in support of the program. Services include construction inspection, claims analysis, public relations and specialized technical expertise. The contracts have a flexible maximum limiting amount provision that allows small firms to compete for these important opportunities.

The Construction Section identified 24 important initiatives that support and promote the advancement of the program. Team leaders were identified, scopes of work were formalized, and a consistent reporting format implemented to track and monitor performance. These initiatives include training, keeping procedures manuals current, advancing the use of technology in construction, working with industry to further our common interests, using business process management to bring about change, improving our web presence and enhancing software to improve work flows.

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Unmet Needs

The Construction Section, much like other segments of the construction industry, suffers from the decline in experience as a result of a long period of post-interstate era retirements. The decline in experience is coupled with a lack of interest in the field of highway construction and attracting the next generation of skilled workers is a major challenge. This industry depends on staff with institutional knowledge and years of experience to be efficient and effective. The workforce is not as deep as it needs to be and the result is an increase in costs to provide the required oversight. Long term the Agency needs to develop staff recruitment, as well as training and retention strategies to become as effective and efficient as possible.

The Section is falling behind industry in the use of new technology in construction. There simply is not the funding or staffing to lead the way with new technology such as GPS, intelligent compaction, and computer applications for mobile devices. These efforts take large sums of money and trained staff to develop and deploy, yet technology offers the greatest hope for managing costs into the future. Important forward leaps in any industry take significant resources and in the current fiscal climate that is not possible.

Goals For Next Year

Deliver the 2014 construction program with zero fatalities in the work zone.
Deploy the new cloud-based Finals Process application and include training for staff and stakeholders.
Host the Contractors workshop, bringing industry partners together to advance our common interests.
Develop Key Performance Indicators specific to measuring the Construction Sections performance.
Deploy a training academy for construction inspection staff.

Section Statistics

A few fun facts about the work we do,

- 4,600 cubic yards of concrete was placed, enough to fill a football field three feet deep.
- 2,200,000 pounds of structural steel was erected.
- 1,000,000 pounds of reinforcing steel was placed.
- 29,800,000 linear feet of pavement markings was placed.
- 578,000 tons (over 1 billion pounds) of pavement was placed.
- 26 major bridges were abated for lead and repainted.
- 1000 pavement cores were tested for density.
- 307 contract change orders totaling \$13.2 million were processed.
- \$7.5 million paid to consultants to provide construction inspectors.
- 16 new contractor claims submitted at a value of \$1,054,000.